ASL

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for Limnology Inc.

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AUSTRALIAN SOCIETY FOR LIMNOLOGY INC.

The Australian Society for Limnology Inc. (ASL) is an association of over 500 people with professional or amateur interests related to Australian inland waters. Since its inception in 1961, the society has played an important role in fostering limnology in this country. The ASL promotes liaison between limnologists in academic, government and private institutions and has a vested interest in the conservation of aquatic and related resources. Annual conferences are held near centres of limnological interest, and the programme includes scientific sessions, field excursions and social activities.

The ASL regularly produces a newsletter with notes on limnological activities, articles of interest, book reviews and announcements of upcoming events likely to be of interest to Members.

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Membership Infomation and a list of the Regional Executive Officers can be found at the back of this Newsletter

CONTENTS

Contents 1
Editorial 2
From the President 3
Prattlebut, Scumour and Ruttle 5
News from the CRC'S 19
CRC for Freshwater Ecology 19
60 Minutes 23
Arrticles 24
New England Wetland Research Site of International Significance. 24
Berri 1996 25
Student Travel Awards 26
Student Prizes 26
Call for Jolly Award Nominations 27
Jolly Award Regulations 27
Announcements 29
ACF Murray-Darling Basin Survey 29
Request for Material: Gastropods 29
Request for Specimens: Trichoptera 30
Workshop on the Cooper: 31
News from FASTS 32
Conference Reports 35
Conference Capers 36
ASL Volunteers 40
Bibliography 42
Regional Executive Members 1995-96 46

Material for publication in the June 1996 Issue of the Newsletter should be sent to the Editor (see back pages) before 30th June 1996.

Long articles should be forwarded as unformatted text on a disk or via email.

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EDITORIAL

I am writing this Editorial while still recovering from South Australia's gripping win in the Shield final at Adelaide Oval yesterday. Unfortunately the University of Adelaide is in shouting distance of the Adelaide Oval, making coherent work impossible while in the distance you hear the roar of "the hill" - there is no other solution than to abandon all and join in.

Again the Editors lament - in this issue there are no controversial topics raised in the hoped for new section "Issues in Limnology" - all I can make of this is that there are no limnological issues in Australia in need of being raised in a public forum, hmmmm. Again no member of ASL has attended a Conference during the last 3 months and there have been no publications. After a brief bout of success I have all but abandoned the Theses and Postcards from the Sedge sections and shall probably die of old age before I receive another "Letter to the Editor". Oh well.

Along with the News from FASTS, in this issue there is a new "News from CRC's" section. There are a number of limnologically related CRC's out there, I have attempted to get some to contribute BUT - if you belong to a CRC and want to see it included then start hassling the relevant people.

With this Issue you will receive information on the forthcoming ASL Conference in Berri, South Australia. We have secured sponsorship from a number of local businesses (including wineries), it should be a great conference - make every effort to support ASL and be there.

DEADLINES FOR THE NEWSLETTER IN 1996

The following are the deadlines for remaining issues of ASL Newsletter Volume 34

Volume	Deadline
Volume 34	
June 1996, *No 2*	30th June 1996
September 1996, *No.3*	30th September 1996
December 1996, *No 4*	31st December 1996

FROM THE PRESIDENT

The ASL now has been in existence for over three decades. Early in the history of the Society an award, the Jolly Award, was established to recognize research contributions made by outstanding limnologists. In this pantheon are a great many well known and well respected Australian scientists, the most recent two colleagues to join the group being Keith Walker and David Mitchell. Both will address the Society at the 35th annual scientific congress in Berri, in what will surely prove to be informative and entertaining presentations.

It has come to the attention of the Executive that the Society might wish to introduce another class of award, to recognize notable past contributions to limnology and/or the ASL in general. This recognition would be in the form of a Fellowship Scheme, in which esteemed members (or past members) would be granted life membership of the Society. A procedure might be that candidates are nominated by the ASL membership, in much the same way as they are for the Jolly Award. A committee might then decide on whether the nominee should be elected to become a Fellow of the ASL. Fellows would receive the honorary title of Fellow, plus life membership *gratis*. They might participate in a voluntary fashion in ASL functions as would befit their esteemed position, including, for example, their forming a body to which the Executive could turn for fatherly (and motherly) advice, etc. The creation of the Fellowship Scheme would require a modification to the Society's constitution, and therefore rigorous discussion by the membership.

So there are two major issues which you should consider before the Berri meeting. The first is the public stance that you think the ASL should adopt over the coming years. Should we become a lobby group, a purveyor of scientific advice, a scientific broker? This issue I raised in my Report in the last Newsletter. The second topic is this more recent one, concerning the Fellowship scheme.

We propose that a suitable procedure for discussing the two topics is for a period to be devoted to debate at the Berri meeting, before the AGM. At the Jenolan Caves meeting were organised a number of workshops dealing with specific topics, in which a 2-3 hour period in the afternoons was devoted to each issue. A similar plan might be used at the forthcoming Berri meeting. At such workshops we could thrash out the major aspects associated with both issues, so the AGM was not clogged up with pointless, unstructured and ill-informed bickering. If broad agreement were reached, the procedural aspects that must ensure would be easy to initiate by the Executive. If the Society were deeply divided about an issue, the debate could continue until a consensus was reached, one or other side gave up, the chief protagonists died, or the issue drifted away into the sands of time. What do you reckon about these proposals? Please give them some thought in the period leading up to the next congress.

And on the topic of the congress, Fran Sheldon and her team have done a fantastic job in organising the Berri conference. It promises to be real beauty. Fran's group deserve your fullest support and recognition, so please make every attempt over the next few months to plan your talks or posters and thus make the conference the great success it has the potential to be.

Paul I. Boon
El capitain generale

PRATTLEBUT, SCUMOUR AND RUTTLE

NEW SOUTH WALES

CSIRO Division of Water Resources, Griffith

from: Sharyn Foster

Greetings from Griffith, Irrigation Wonderland. Many staff changes have occurred here over the past few months. Project DED (Chemical and Biological assessment of Contaiminated waters) looked DEAD for a short moment, until **Peter Fairweather** was called in to re-group the remaining troops. **Denise DePaoli** handed the *Ceriodaphnia* sp. over to **Cheryl Orr** and headed into 1996 as a waitress with the completion of her term. Her cat feeding skills proved to be far to valuable a skill to lose, and she is now back with us 1/2 DED 1/2 DEB (Biology and Control of Toxic Blue-Green Algae) keeping **Philip Orr** in line. **Cheryl** has quickly adapted to being a Mother of thousands. She is now looking very closely at her offspring's most intimate anatomy to determine wether any males have entered what is preferably a female domain.

Gillian Napier has called in some assistance with her "real bug" work. **Praba Pathmanathan,** who has been the weekend nappy changer, is now spending hours at the microscope to look at "how many setae are on the 2nd branched segment of the third pleopod", and doing a great job. **Sharyn Foster** has been "re-called" to try and putty up the huge gap left by Wolfie's **(Wolfgang Korth)** departure. She wishes she was made of that poly-filler that expands as it dries - the gap is pretty big. **Wolfie** has headed off to Canberra and has joined the ranks of the Bureau of Resource Sciences. He is the residues program Chemist with the national residues survey, as well as answerer of numerous cries of help from **Sharyn** back in Griffith. The latest DED departure of the smarty Marty party **(Martin Thomas)** was another sad occasion. Marty's dry sense of humour and quick wit is already being missed. **Martin** has joined the EPA at Albury as an 'Enviro Cop". Move over Arnie.

Jane Robert's DEF (Rivers and wetlands project) crew have added a new recruit, **Jane Schuette** from the USA, to their ranks. Jane will be spending about 2 years with the project as a post doc. Aided by **Adrienne Steer,** these partners in crime can be heard throughout the Laboratory scheming hideous torture to be performed on unsuspecting desiccators. **Brendan Ebner** has been spending hours of fun with local Economist **John Madden,** determining the cost of Carp. What was the difference between Economic and Financial again? **Shaun Meredith** has travelled to Adelaide to attend the Oakbank picnic race meeting, oh and to hand in his draft copy of his Masters Thesis believed to be titled "My Thesis and Me". **Geoff McCorkelle** and **Andrew Palmer** are still the only ones doing "real work".

Gary Jones' move to Brisbane signalled an excuse to have a fairly wild party. Talk about contacts. This guy organised his own band, less the orange overalls. With the end of the multi divisional algal program **Gary** again took the oportunity to celebrate. This time in the form of a carefully thoughtout, scientific insight into potential sources of P in the environment during a radio interview.

University of Technology, Sydney

from: Richard Lim

The new academic year has started with the enrolment of **Grant Hose** and **Simon Mitrovic** in the PhD programme. **Grant** will be looking into the effects of the pesticides endosulfan and chlorfluazuron on aquatic macroinvertebrates in stream mesocosms. He is presently building these mesocosms on the banks of the Namoi River at Gunnedah and will monitor them until the coming summer when dosing experiments begin. **Simon** will be looking into the factors that control the development of blue green algal blooms particularly in the Darling River and the Nepean River. In addition, four students have begun their Honours programme in various areas of aquatic ecology. **Scott King** is looking into the effects of urbanisation on aquatic plants in Sydney streams. **Kellie Leigh** is conducting experiments to evaluate the role of suspended sediments on the toxicity of endosulfan to aquatic organisms. **Rebecca Rose** is developing QSARs for narcotic toxicants to the cladoceran, *Ceriodaphnia dubia*. And **Adam Schmalz** is looking into the influence of season, sex and estuary location on the diet of the dusky flathead, *Platycephalus fuscus*. Two PhD students, **Ron Patra** and **Scott Markich**, have completed their experimental work and are in the process of writing their theses. **Warwick Hayes** has successfully completed his PhD programme. His thesis was on the chemical relationship in water and sediments in some urban streams with particular reference to heavy metals and phosphorus.

University of New England

from: Geoff Smith

Here in sunny Armidale were enjoying some unseasonally warm weather and are starting Autumn sampling without wimpering a bit. To add to the scene a drought breaking summer has provided full wetlands for the first time in years. One of our wetlands, Little Llangothlin Nature Reserve is now a Ramsar site (see Articles Section - ed). The site has received the attention of many researchers over the decades including **Sue Briggs, Bob Haworth** and at present **Dorothy Bell**, who is not sure if she can cope with beauracratic changes and field sites under half a metre of water.

Two new students in Aquatic Botany didnt come down in the last shower. **Nicole Fitzpatrick** has started her graduate diploma investigating phytoplankton in natural and artificial wetlands with help from **Steve Skinner** up from Adelaide, who is the new Head of St. Alberts College. **Nunzio Knerr** is in Kakadu working towards his

honours, being jointly supervised by **Max Finlayson** and **Margaret Brock** investigating the seedbank ecology of the Kakadu floodplain after invasion by para grass. **Michelle Casanova** is off to a charophyte conference in the states in July and we're all getting organised for the INTECOL meeting in Perth.

Meanwhile, back in the bug lab up the hill in Ecosystem Management, some new students have arrived to wet their feet. **Sue Botting** (ex Adelaide) has commenced a PhD examining the effects of riparian treeplanting up on the Tablelands. Tree groups have been replanting for nearly 20 years now but we have little information on how effective these activities have been in terms of changes in water quality or bug communities. The work is to be funded by the local TCM and NSW NPWS have also added some funds to extend the sampling down into the Oxley Wild Rivers National Park where **Allana Finlen** and **Lachlan Copeland** sampled bugs and fish last year. Other student projects are focussing on breakdown rates of willows, casuarina (anyone out there with information on breakdown rates of these?), pine, Lantana (a real threat to riparian vegetation over much of lowland NSW streams) and several rainforest spp; a survey of downstream impacts of forestry road crossings near Dorrigo, arsenic impacts on hyporheic invertebrates and benthos near Glen Innes, impacts of river regulation on bugs along the Gwydir and Horton rivers, and effects of siltation on hyporheic bugs too, in the Never-Never River in the Promised Land (really, these places do exist!). **Andrew Boulton** has started sorting the EPA MRHI samples from the Bellinger and Macleay, happily seeing what has changed since **Tillyard** and **O'Farrell** collected some of these sites some years (decades) earlier. The hyporheic work continues and recently, the mighty team of **J. Growns** and **Mark Harvey** examined a subpotamonological bevy of eight-legged wonders, including the notorious "nippered" mite (the "party-animal").

Sandra Grinter has finished her summer samples along rivers in the Nambucca catchments and now faces a huge pile of bugs to examine. **Kim Jenkins** has astounded the locals of Tharwa by the number of washtubs in her garden and under the house as she floods sediments of different sizes and samples the resultant invertebrate soup. The study of P dynamics in Carcoar reservoir and Lake Rowlands by **Colleen Watts** continues and she hopes to present some preliminary results at ASL. Other nutrient studies in conjunction with a model of water movement are being done by new PhD student **Ben Harris**, cosupervised by **Richard Faulkner** in Resource Engineering. This work, in Malpas Dam (Armidale's water supply) is aimed at controlling blue-green algal blooms more effectively, and is partly funded by the local City Council.

Australian Water Technologies (EnSight)

from: Bruce Chessman

Now is the season of the autumn macroinvertebrate sampling throughout the Hawkesbury-Nepean basin for various projects. **Colin Besley, David Holleley** and **Simon Williams** are busy with the Environmental Indicators program that monitors the effects of Sydney Water's activities on water quality and aquatic biota. **Ivor Growns'** projects are assessing the effects of water abstraction and flow regulation on macroinvertebrates and diatoms, and developing predictive models of the abundance of invertebrates in relation to current and depth. **Lisa Silva** continues to keep our macroinvertebrate reference collection and database up to scratch to handle all the new species that keep turning up.

Nimal Chandrasena and **Joe Pera** are probing the causes of cyanobacterial blooms at several surban locations around Sydney, and focussing on the control of European carp as a potential strategy for reducing bloom frequency and severity. **Peter Hawkins** and **Brett Neilan** (CRC for Drinking Water Quality and Treatment) are about to launch into a new project to relate toxin production by *Anabaena* and *Microcystis* strains to the nature of cellular DNA. In another project with the CRC, **Nimal** will be involved in the development of capillary electrophoresis methods to measure cyanobacterial neurotoxins in cell concentrates and water.

The R&D projects under the Monitoring River Health Initiative are now entering their final stages. **Paul McEvoy** and **Bruce Chessman** are number crunching to see whether separate macroinvertebrate family biotic indices can be developed to indicate sewage pollution, metals pollution and dam impacts. **Bruce** is also looking after the rapid diatom asessment project, which is approaching the end of the identification phase. The joint project with the Victorian EPA on evaluation of rapid biological assessment for RIVPACS modelling is also close to completion. **Rod Hardwick** has left us for distant shores but **Jane Growns** has picked up the cudgels to complete the data analysis. **Jane** is also coordinating heaps of water quality assessment and contaminant load calculation on Berowra Creek and other sewage-polluted streams, as well as delving into watermite taxonomy in her spare (?) time.

Brendan Atkins, Jane and **Bruce** are about to launch into a water quality and biological monitoring program for the Australian Conservation Foundation's 'Restoring the Waters' project. This exciting project aims to restore a diverse ecosystem to a creek in south-western that has been converted to a concrete drain. **Brendan** is also involved in various wetland projects, including wetland mapping in the Gosford region.

Peter Swanson and **Merran Griffith** have taken over the Sydney water catchment monitoring after the departure of **Dianne Flett** to Streamwatch. They now have an

enormous data base of manual dry-weather and autosampler wet-weather data from which to calculate all sorts of pollutant loads and generation rates. And **Cathy Cantwell** is wrapping up a catchment project on the Wollondilly River system, looking at sediment quality and macroinvertebrate communities in relation to point discharges and land-use.

Several staff trooped down to Albury for **John Hawking's** recent taxonomy workshop at the MDFRC (so where were the Conference Reports???? - ed). A terrific event and a great time had by all. What's more we were able to add another new leptophlebiid genus to **John Dean's** ever-growing list.

Murray-Darling Freshwater Research Centre

from: Jo Thompson and John Hawking.

The Lower Murray Basin Research laboratory, located in Mildura is expected to be up and running in the near future. **Alan Chick** has spent the past two weeks preparing the laboratory, stocking the lab with basic equipment, establishing the office and accomodation wing and organising telecommunications such as fax machines and telephones. Dr **Ben Gawne** has been appointed and should take up his position around mid-May this year. A technician will also be appointed and it is also expected that at least four research positions will be based at the Mildura Laboratory in the future.

The Lower Murray Water Authority has made the building available at a nominal rent. Funding for the new laboratory was made available by Water Authorities and Local Government Authoritories in the Sunraysia Region., the Co-operative Research Centre for Freshwater Ecology and Victorian Government. Donations were also received from bodies such as the Commonwealth Bank.

The Laboratory will have as its main interests - algal blooms, Flow management, Menindee Lakes Management and Carp Ecology. It will also serve as a Resource Centre for regional Water Authoritories.

Alan has also been involved in small mammal surveys on the Ovens River floodplain. Two surveys have been completed to date with: 6 bat species, koala, brushtail possums, sugar-gliders and yellow-footed antechinus, being either trapped or spotted. The surveys are part of a Spatial and Temporal Variation between Billabongs Project and are aimed at leading to a greater understanding of billabong-floodplain-river interaction. Two more surveys are expected to be done in the next 12 months with voluntary survey teams from Charles Sturt University, NSW Conservation And Land Management and Victoria's Department of Conservation and Natural Resources.

Our 8th Taxonomic Workshop was held on the 20-21 February and approximately 100 students and taxonomists attended. This years workshop dealt with Molluscs and Mayflies (Ephemeroptera) and was an outstanding success. Participants came from all over Australia, including the Northern Territory, Western Australia and Tasmania.

Proceedings of the workshop are available as taxonomic keys and orders and more information is available from John Hawking, MDFRC, Ellis St, Thurgoona, 2640 or telephone 060-431002.

Darren Baldwin is running a workshop at the MDFRC on nutrient-sediment interactions on April 30- May 1, 1996. **Darren** is expecting approximately 50 participants, many of whom are students. Participants will travel from as far away as Perth and Tasmania. (We believe thats just for the food!!) For more information please contact Darren on 060-431002.

Damian Green and **Jon Wittington** have just returned from a really smelly substantial algal bloom at Chaffey Dam, complete with surface scums. Terrific stuff - especially for those people with a 'thing' for algae. Welcome back lads - the shower is this way! **Paul Humphries** and **Luciano Serrafini** have been extremely busy out in the field and in the laboratory with the commencement of their Environmental Flows Project in the Campaspe and Broken River systems. They have experienced one small hitch when their boat bounced off the trailer as they were driving along. Apparently the motor came off the boat, bounced three times and ended up back in the boat (which was now on the side of the road- with a hole in it!) in three pieces. Heresay tells us that they forgot to tie the boat down but **Luciano** assures us it was the ratchet that bounced loose. Just what you don't need- a ratshit ratshet!!

In the last newsletter we apparently trod on some toes... too bad! However an apology is extended to **George Ganf** from Adelaide for mistaking him for **John Green** in the fishing story and vice-versa to **John Green** from New Zealand for mistaking him for **George Ganf**. One who cannot be mistaken for **George** is **Russell Shiel**, who is going overseas for ten days, to Tasmania, to work with **Peter Tyler**. They will be studying the coastal lagoons at St Helens on the eastern coast. We believe it is a very nice place and well known for the crayfish! Have a few for us **Russ**.

Mike Copland (MDFRC) and the Albury Rotary Club, together with the Co-operative Research Centre for Freshwater Ecology are running the summer school from Monday April 8 - Friday April 12 inclusive at the MDFRC laboratories in Thurgoona . 25 year 11 students have been chosen from local schools by their teachers for outstanding achievements and will be accomodated at The Scots School, Albury for the week. The Summer School will interact with the staff of the CRCFE/MDFRC, University of Canberra, La Trobe University and the Murray-Darling Basin Commission and is designed to heighten the understanding of the students about the role of scientists, their methods and the place for research in our society. The school has a practical base and we hope that the students have a great time. We're looking forward to it.

Mike is also involved with a new CD-Rom package which should be out by June. The package is a joint venture with the NSW Board of Studies and the first CD in the series on irrigation in the Murray-Darling Basin is about Barmah/Millewa and Environmental Watering. The entire package is called Waterlines and will be

despatched to schools and libraries. Further information and copies can be obtained from **Mike Copland**, MDFRC, Ellis St, Thurgoona, NSW, 2640 or telephone: 060-431002.

Firstly, thanks from the algal department and Bon Voyage are extended to **Marike van Nouhuys** who has left MDFRC after three months work to travel to Canada, Nepal, Thailand and Europe. **Marike** is apparently going to be doing some voluntary work on crocodiles in Nepal- sounds interesting doesn't it!?! Also, **Helen King** is about to embark on three months holiday to far-off places such as South America and the Galapagos Islands, England, Scotland and Holland. We all wish H a wonderful time and wish we were all going with her. **Christine Rees** is finishing up in the algal department at the end of April and is planning a jaunt overseas as well. Good Luck Christine, see you at Portsea sometime. **Kerrie Lee** is also leaving the algal department at the end of June (**Rod**- looks like the algal empire is crumbling!) and Kerrie is planning to take up a PhD in Sandiology.

Thought for the day....

Remember the guy who went into the pizza shop and ordered a pizza with the lot? The pizza guy asked if he wanted it cut into 6 pieces or 8 pieces and the guy said : "6!- I couldn't eat 8!!!!!"

SOUTH AUSTRALIA

University of Adelaide

Department of Botany

To outsiders, the future of the South Australian meat preserving industry, the Crows' away games and the MFP may appear shaky, but to Croweaters there is no doubt about their rosy future.

The wetlands for stormwater treatment is the first project begun by the MFP and the enormous site at the Barker Inlet, near Port Adelaide, has been planted and is receiving stormwater. In the Limno Group in the Botany Department, **George Ganf**, **Kay Morris** and **Marcus Brownlow** are involved in advising the MFP how to run the thing and in assessing its success. The wetlands encompass a salinity gradient from quite fresh input water through to seawater, and, in places, soil salinities reach up to 40g per litre only 30 cm into the soil. Salt may provide problems for plant growth and treatment efficacy.

Hence **Kay's** continuing PhD. experiments on the interaction between nutrients and salinity. A big dose nutrients helps plants to survive in salty water, so it may just be a

matter of time before we are asked by the MFP to wash our cars in the street again, this time with extra P enriched car shampoo.

Sean White, our Plant Torturer in Residence, uses every contraption imaginable to measure resistance to gas flow in *Typha*. He is plumbing plant organs to expensive black boxes to look for gas-flow bottle necks. It rather looks like an R.L. Hubbard plant pain investigation to me.

Is FDA a good predictor of phytoplankton growth? This irresistibly fascinating question is being tirelessly pursued by **Justin Brookes** and **Sean Geary**. Having collected samples from Swan Reach to Morgan on the Murray, they are matching their predictions of growth based on FDA (a dye) activity with more conventional bioassays and cell counts. JB and SG are getting answers 3 days earlier than water monitoring techniques provide, with good correlations between the results.

Marcus Cooling has refined a technique for measuring carbohydrate concentrations in aquatic macrophytes and has at last found that flooding both depletes starch reserves in rhizomes and reduces the ability of these organs to reproduce vegetatively. Surprise, surprise. But this has implications for how the effects of a bad flood are delayed after the event and the form the effect may take.

River Murray Lab

from: Stuart Blanch

Keith Walker is involved in *Murray Mysteries*, a three-year NRMS-funded program of public "field days" at river towns. These involve guided tours to sites of interest along the river, and short talks designed to promote interest in the natural history of the river, in the broadest sense. Speakers include lockmasters, fishermen, oldtimers and any others with a story to tell, in addition to a core group that include an ecologist, geologist and ecotourism operator, and river managers and educators.

Keith is also supervisor for a number of new students with project topics that include mayflies and stoneflies as water-quality indicators (**Sarah Farrelly**, MSc), bird diversity in the Torrens Linear Park (**Jason van Laarhoven**, MSc), decomposition of plant litter in lower Murray wetlands (**Marielle Janssen**, BSc(Hons)) and the ecology of the introduced snail Physa acuta (**Sue Graham**). He will soon begin a study with **Anne Jensen** (DENR) and others that will relate the health of wetlands along the lower Murray to changes in the flow regime; funding has been obtained to support as many as four PhD projects, but details have yet to be worked out. Now you don't come across many projects like that, these days!

Fran Sheldon is maintaining her usual hectic pace. In between studying the effects of flow regulation on organic matter accumulation in the Darling River in a LWRRDC-funded project with geomorphologist **Martin Thoms** (University of Canberra), and organising the ASL Congress in Berri this September, she still manages to churn out

informative and slick Newsletters. **Cath Francis**, an Honours student of Fran's, is studying decomposition and use of regum leaf litter and bark in the lower Darling River.

Jim Puckridge and Keith are involved in a LWRRDC funded project examining time-share flooding of floodplain lakes. Jim has been able to use data from his PhD research examining fish ecology in the Cooper Creek, South Australia, to determine more environmentally sound flooding patterns for regulated mid-Murray lakes.

Lorenzo Vilizzi has been aging carp otoliths with the image analysis computer package Adobe Photoshop. This will allow him to determine if a relationship exists between the age structure in several lower Murray carp populations and flow patterns. He has also been aging otoliths from carp recently detected in hydroelectric dams in Tasmania to assist the efforts of staff of the Inland Fisheries Commission to prevent the spread of carp to other lakes. He also nears completion in picking bugs in a joint NRMS-funded project with **Adrienne Burnes** and **Stuart Blanch** on the effects of minor flooding in the heavily regulated lower Murray. Preliminary evidence indicates increased numbers of chironomid larvae in the littoral zone following shallow floodplain inundation.

Adrienne has been analysing dissolved organic carbon and particulate organic matter data, which suggests a relationship between floodplain inundation and POM levels in littoral waters. **Stuart** has been finishing a report with Adrienne and Sam Wade on the aquatic flora and fauna of natural and artificial wetlands in the arid Leigh Creek area, South Australia. He is about to commence a pond experiment examining the influence of turbidity and light attenuation on the survival and performance of the submsersed plant *Vallisneria spiralis*.

Limno Lab

from: Sam Wade

Mike Geddes is on study leave for 1996. He is spending some time at SARDI with **Richard Musgrove** and **Stephen Clarke** working on the ecology, physiology and aquaculture of fresh water crayfish. **Mike** recently went to the 1996 World Aquaculture Society meeting in Bangkok. The highlight of the trip was the post conference tour to the filthiest aquaculture ponds Mike has ever seen. These ponds are used to grow catfish and *Macrobrachium*, often served by local restaurants and probably eaten by many delegates during the conference. Interesting talks were given by **Stuart Rowland** on Silver Perch aquaculture and **Clive Jones** on freshwater crayfish farming.

Sandi Gardiner has started an honours project assessing some much hyped "microbial bio-remediation products". These products are supposed to improve water quality and

animal health in aquaculture ponds. **Sandi** is testing these products in Marron ponds on Kangaroo Island.

Tara Ingerson is continuing her work on shelters and Marron growth. She has 2500 Marron waiting for her on Kangaroo Island ready for her next experiment. If they are not experimented on soon they may be borrowed for the Zoology Department graduation dinner in May.

Sam Wade was about to carry out his final experiment on nutrient uptake in springs in the Flinders Ranges but was foiled by floods which scoured his sites. This could be a good excuse to finalise the field work and spend more time on the microscope and computer.

A number of Botany and Zoology limnos had the good fortune to attend **Michelle Bald's** wedding on Kangaroo Island. **Michelle** married **Matthew Wheal**, an ex-Zoology birdo, on the banks of the Eleanor River. We resisted the temptation to sample the river but were happy to sample the excellent BBQ marron at a truly lavish reception. Congratulations to the happy couple.

Australian Water Quality Centre
(a business unit of the SA WATER Corporation)

from: Peter Schultz

We have found work for another 3 months **Vladimir Tsymbal**. **Peter Goonan** will leave our MRHI team to take up **Phil Suter's** old position as freshwater biologist in the south Australian EPA. We wish him well and look forward to maintaining close ties between our organisations in the future. **Chris Madden** will be taking some leave to finish writing his PhD thesis.

The investigation of the effect of herbicides, used to remove feral riparian vegetation, continues. The kill rate for blackberries has been quite disappointing where no surfactant was used.

Other studies continue and two new projects are in the pipeline. We are also trialing a rapid assessment technique and should be able to report on it by next ASL Newsletter.

NORTHERN TERRITORY

NT Power and Water Authority

from: Simon Townsend

Water Quality Evaluation Branch may only be small (n=10), nevertheless there always seems to be staff changes. **Michael Lawton** now heads up the Branch. **Michael's** research interests lie with the rehabilitation of the Rum Jungle project on the Finnis River, and acid-mine drainage generally. **Lynne Powell** joins the Branch. Not long ago Lynne escaped the winter cold of Antarctica, where she pursued a special interest in the microbial ecology of meromictic lakes, which turned into a PhD study. She now joins us in the hot and humid tropics, and is working on the water quality aspects of the Mary River catchment. Waterwatch is run from the office of the Water Quality Branch, though it is an independent program. Recently Water Quality Evaluation staff helped out with a workshop, designed for members of the public new to the field of water quality. This was a great success, though I can't attribute this soley to the contribution of WQE staff. Everyone seemed to find macro-invertebrate sampling was especially interesting, whilst pH and temperature measurement of waters seemed a bit "ho hum". **Kate Gowland**, who headed up NT Waterwatch, has moved to Canberra to take on the position of national Waterwatch co-ordinator. Shes been replaced, for the moment, by **Steve Sly**.

Environmental Research Institute of the Supervising Scientist

from: Ruth O'Connor

On the biological monitoring monitoring front we have a few new faces lurking around the lab and peering down microscopes. **Lisa Thurtell** (ex Land and Water Conservation - Forbes) started with us last month to work on one of the (endless?) QA/QC projects we are involved with as part of the National River Health Program. Her particular work will look at what sort of macroinvertebrate community estimates come out of state and territory agency field picking and laboratory subsampling. **Neil Tripodi** (from UNE) with help from some other new faces (**Robin Galbreath** and **Stacey Braund**) are wading through a mountain of samples they have collected from Magela Ck as it started flowing with the onset of the Wet Season. Hopefully this will add to our knowledge of temporal variability of intermittent streams.

Last month saw ERISS host a workshop to plan for the revision of the ANZECC sponsored 'Australian Water Quality Guidelines for Fresh and Marine Waters'. The approximately 20 participants, from most states and territories, had backgrounds that emphasised ecological protection. The main outcomes of the workshop were: to more clearly define the philosophy and scope of the Guidelines; to give greater emphasis to biological indicators of ecosystem health, compared with physico-chemical indicators;

and to provide users with additional guidance on protocols for sampling design, analysis and interpretation.

If you wish to have input to the revision of the Guidelines, please contact **Chris leGras** at ERISS {phone: (089) 799 770; fax: (089) 792 618; e-mail: CHRISL@eriss.erin.gov.au.

Readers may be aware of ERISS's involvement in the joint Tasmanian- Federal Government program to develop a strategy for remediating the environmental effects of past mining at Mount Lyell. The Mount Lyell Remediation Research and Development Program (MLRRDP) comprises a number of projects to investigate the extent and mechanisms of the environmental impacts which have resulted from mining activities, as well as to set remediation goals for the Queen and King rivers. One of the new MLRRDP projects aims to conduct 'whole-effluent' toxicity tests on Mt Lyell mine effluents. This info will assist in providing an initial estimate of water quality remediation goals for the Queen and King Rivers. This work will be conducted by ERISS staff in Queenstown from May-July 1996. With this polar shift in climate, Caroline Camilleri has been busily dusting the cobwebs from her thermal underwear in readiness for the warmth and hospitality of this charming jewel of the Tassie West Coast.

On the wetlands side of things, a review on the Conservation Status of NT Wetlands is in its final throes (thanks to **Michael Storrs**). Meanwhile, Max Finlayson is an illusory figure making preparations for the upcoming RAMSAR conference and organising collaborative wetlands and coastal research. Speaking of the illustrious **Max**, some seedbank work he was involved with in 1984 is being expanded upon by another of our UNE recruits, **Nunzio Knerr**. Nunzio will be germinating seed from soil cores collected on the Magela floodplain to compare what is growing on the floodplain to what is in the seedbank - particularly relevant since the post 1984 invasion of Para grass (*Urochloa mutica*).

Elsewhere on the Magela floodplain **Kym Brennan** and **Ben Bayliss** are examining the phenology of *Hymenachne acutigluma* to provide information for the harvesting of its seed for use in floodplain revegetation work. This native species is a desirable pasture species that would be used by pastoralists after the dreaded *Mimosa pigra* has been removed IF the seed is available. At present the only seed available for this is for the invasive exotics Para grass and *Hymenachne amplexicaulis*. Previous harvesting attempts with *H. acutigluma* have had difficulties with low seed viability.

The annual monitoring of billabong fish and and stream invertebrate communities is fast approaching with the end of the Wet season and preparation for this is beginning. This year we are to have two technical officers from Ok Tedi in PNG working with us as part of an exchange program and we look forward to exchanging lots of lies about the various dimensions of tropical wetlands and the quality of beer.

TASMANIA

from: Jean Jackson

The most limnologically exciting news from Tasmania since the last newsletter is probably the weather. We had the wettest February day ever recorded, in the middle of a very wet week or so. People had parts of Hobart, Newtown and other Rivulets running through their houses. It was all very spectacular, but off course played havoc with field work and field experiments. **Martin Read** is still recovering and seems to have moved permanently into the field. It was too much for **Belinda Robson** and **Ed Chester**, who have left Tasmania for the sunny and dry West whence they came several years ago. **Belinda** has successfully completed her PhD.

Other big news from around the uni is that **Leon Barmuta** will be married by the time you read this (to **Menna Jones**). Congratulations! Hope its not outdoors... We are still waiting for **Dave Crook** to chow up in Leon's lab with experimental swans for his PhD. **Jean Jackson** has commenced an MRHI-funded taxonomic project in the Zoology Dept. and has been collecting demonstration microscopes (see "Request for Specimens"). **Peter Davies'** group is busy as usual, with continuing work on several projects. April will be filled with sampling for an RFA (Regional Forest Assessment) project with ANCA.

At the DPI, **Mark Nelson** and **Nick Probert's** National Landcare-funded project on methods of determining environmental flows has been delayed by the wet weather but fieldwork is now underway in several rivers around the state, measuring habitat diversity.

IFCs work on *Galaxias pedderensis* during low flows has paid off, with the finding of three fish in streams flowing into the Lake Pedder impoundment. A *G. pedderensis* was also found in Lake Oberon in the Western Arthur Range, where some fish had been translocated a couple of years ago in the hope of establishing another population, away from predatory and competitive fish. Thus things are looking more hopeful for the survival of this critically endangered species.

PAPUA NEW GUINEA

from: Ian Roderick

There is little to report in the way of limnological escapades at Ok Tedi since the December newsletter. The only item of note is that Abbie Spiers from ERISS joined us for just over 2 weeks during February as part of our technician exchange programme. The majority of that time was spent conducting routine quarterly fish sampling in the Middle Fly River region. I don't know whether we managed to totally convince her of the joys of fish biology, however, she did enjoy the overall experience.

As I mentioned, there really isn't much to report, so 'Em Tasol' until the next newsletter, when hopefully there will be more.

NEWS FROM THE CRC'S

CRC FOR FRESHWATER ECOLOGY

Lower Basin Laboratory to open soon

The Lower Basin Laboratory of the Murray-Darling Freshwater Research Centre is set to open in May.

Research scientist, Dr Ben Gawne, has been appointed to head the laboratory in Mildura which will investigate algal growth, river productivity and management of the Mendindee Lakes system.

Dr Gawne has been conducting post doctoral work on large lowland rivers in Nebraska and is expected to start work at the laboratory later this month. A technician and part-time administrative assistant are also expected to be appointed to work in the lab.

Work has already begun on setting up the laboratory in premises owned by Lower Murray Water.

The laboratory, which has tremendous support from the locals, is a joint initiative between the CRC for Freshwater Ecology and the Sunraysia community including Victorian and NSW councils and water authorities from Regions 3 and 4 of the Murray-Darling Basin.

Lake Eyre Basin Steering Group

CRCFE Director, Professor Peter Cullen, has joined the Lake Eyre Basin steering group which held its recent meeting at Maree, some 800km north of Adelaide near the shores of Lake Eyre.

The steering group is made up of agency staff from South Australia and Queensland, a number of community groups, mining and pastoral industry representatives and local government. The Conservation Council of SA, Queensland Conservation Council, Landcare and ATSIC are also represented.

Major issues the steering group is likely to address include:

- Excessive extraction from the Great Artesian Basin through uncapped bores, and deliberate extraction for mining and pastoral industries leading to a drop in pressure, with resulting impacts on the important mound lakes and ongoing availability of water.
- The proposal to have the area declared a World Heritage Area.
- Feral animals and their control.

- Proposals to extract water from Cooper Creek to support a new cotton industry has raised concerns of water extraction and environmental flows for the chain of ponds that make up the Cooper.
- Nutrient and chemical contamination.

NSW Fish Survey

NSW Fisheries Research Institute staff and the CRCFE will have conducted 320 field trips at 80 randomly selected rivers by the close of this summer's sampling run.

This frenetic field work has been part of the NSW Rivers Survey, the most comprehensive survey of freshwater fish resources in NSW, possibly Australia. It covers the North Coast, South coast, Darling and Murray regions.

Within these regions, four classes of rivers have been sampled each summer and winter for two years: montane, slopes, lowland unregulated and lowland regulated. Five randomly selected sites are sampled in each river class.

This final sampling round includes a calibration experiment to estimate the absolute abundance of the fish populations. This involves using stop-nets to confine fish in a 0.5-1km stretch of river and fishing the site repeatedly. Captured fish are released either side of the stop-net.

The $1.25 million survey is funded by five agencies including the Resource and Conservation Assessment Council, the CRCFE, ACT Parks and Conservation, the NSW Office of Economic Development and NSW Fisheries.

As well as providing data on the freshwater fish population in NSW the study will provide an overview of the health of NSW's rivers and streams. Information such as the distribution and ecological effects of alien species such as carp is expected to be gleaned from the study as well as a better understanding of the ecological effects of river regulation. The study will also provide vital baseline data for future monitoring of fish stocks as well as providing a survey structure which may be adopted by government agencies of research groups in the future.

Data analysis will commence this autumn. The survey is expected to be completed by December.

For more information, contact CRCFE Fish Ecology Program Leader, Dr John Harris, at NSW Fisheries Research Institute on (02) 527 8433.

Carp "mumblings"

Determining the impact that the "mumbling" bottom-feeding action of carp have on aquatic plants is the aim of a CRCFE Fish Ecology project being conducted by Jody Swirepik (nee Moore).

Experimental work for this Masters thesis has been conducted at the Narrandera Fisheries Centre using ponds with an established cover of aquatic plants. Control areas were established using exclosures which prevented carp from entering areas of the pond. Changes in plant biomass, species composition, sediment disturbance and water quality were recorded over eight weeks.

Field work conducted last year produced good results for the sediments but uncertain results for waterplants. Sediment pots yielded up to 10 times as much sediment as the control pots indicating that carp were vigorously stirring the bottom sediments.

However, the 500kg/ha of carp had no effect on the floating pondweed *Potamogeton tricarinatus*. In fact, the biomass in both the control and treatment areas was reduced during the course of the experiment.

Jody says there were a few possible reasons for this:

- the species of waterplant was not vulnerable to carp disturbance;
- the density of carp was not high enough;
- the experiment design lacked robustness; and
- seasonal influences.

Jody is planning a follow-up experiment to look at the effect of carp on the capacity of plants to establish after inundation. She can be contacted at the NSW EPA, Queanbeyan on (06) 299 3330 or by email at: swirepik.jody@epa.nsw.gov.au

Collaboration - the challenges for scientists

A report will be available soon on the Collaboration Workshop held recently at the University of Canberra.

The workshop, hosted by the University and the CRCFE, was attended by about 30 people from the CSIRO, the University of Canberra, other CRCs, resource management agencies and government departments. Dr Dave Rosenberg and Dr Trefor Reynoldson, both from Canada, and Prof Vince Resh, from the USA, also attended.

Issues highlighted during the two-day workshop included:

- The need for strong leadership and the ability to sustain stimulating interaction across boundaries.
- The lack of awareness, particularly in recent graduates about the "philosophy of the trade". Science philosophers such as Popper were no longer compulsory reading for students.
- Lack of project planning in the day-to-day routine.

The common denominators of effective collaboration were seen as being:

- Developing trust and personal relationships;
- Bonding of parties;
- Clarity of organisational responsibilities, commitments and performance monitoring as well as the expected benefits and how they are to be shared;
- Demonstrated organisational learning that delivers benefits to the organisations as well as the individuals; and
- A positive attitude by all parties.

Model for national river health assessment

Work has begun in earnest at the University of Canberra on the National River Health Program contract to develop predictive models for river health based on macroinvertebrates.

Assoc Prof Richard Norris is coordinating the 14 month project which is aimed at providing all State agencies with a standard format for predicting river health.

Project research officer, Justen Simpson, says the project involves close liaison with State agencies including the NT Power and Water Authority, ACT Department of Environment, Land and Planning, the Department of Primary Industry and Fisheries in Tasmania, the Qld Department of Primary Industry, the WA Department of Conservation and Land Management, and the EPA in SA, Vic and NSW.

Data from the four sampling rounds conducted in each State during the past two years will be collated to produce the predictive models which will be developed with input from the agencies.

The predictive modelling is based on the work conducted mostly in the UK. The models have been developed and tested for Australian conditions by the CRCFE.

Justen says the effort to assess river health on a national basis has already produced valuable spinoffs. The monitoring work initiated throughout the country by the program had greatly increased knowledge about the distribution of aquatic habitats, their fauna and Australian freshwater ecology.

60 MINUTES

ASL TELECONFERENCE, 8 FEB 1996

Present: R.Marchant, P.Boon, F.Sheldon, M.Brock

1. **Berri Conference:** The Berri Hotel has been booked for 29 Sept - 3 Oct. Two Jolly Award addresses will be given as well as an after-dinner speech. Time has been set aside for a poster session and a small trade show. Registration forms will be distributed with the March newsletter; student travel awards will also be announced in this issue.

2. **Biomanipulation workshop:** M.Bales' representative indicated that registration forms would soon be sent to F.Sheldon, that letters of invitation had been sent to propective foreign speakers and that $2000 in sponsorship had been raised. LWRRDC has still not sent ASL a contract for running this meeting. P.Boon will contact LWRRDC to determine the situation.

3. **Honorary Life Fellow:** It was suggested that a fellowship scheme be inaugurated to honour those limnologists who have made major contributions and who are now retired. The recipient would pay no ASL fees. P.Boon will write a short piece about this for the next newsletter and it will be discussed at the next AGM.

4. **Wetland workshop:** P.Horwitz has prepared a wetland policy statement for the ASL which is now circulating to members of the wetland committee.

5. **ASL brochure:** R.Marchant is overseeing the production of a new brochure outlining the activities of the ASL. This will be sent to all new members along with a revised letter of introduction to the society prepared by M.Hart and P.Boon.

6. **ISSN number:** M.Brock has enquired into obtaining an ISSN number for the abstracts of an ASL congress. The society only needs to register the name of the conference abstracts to get a number.

7. **Lobbying:** Issues related to lobbying activities by the ASL and its members must be discussed at the Berri conference. It was suggested that a specific session devoted to this topic should be held at the conference. F.Sheldon indicated that there was time for such a session in the timetable currently being drawn up.

ARTICLES

NEW ENGLAND WETLAND RESEARCH SITE OF INTERNATIONAL SIGNIFICANCE.

Little Llangothlin Lagoon, a shallow wetland on the New England Tableland between Guyra and Glen Innes has recently been declared as an internationally signigficant wetland site under the United Nations affiliated Ramsar convention. As one of nine new Australian listings which brings the Australian list to about 50, it joins wetlands such as Kakadu, The Macquarie Marshes and Blue Lake in Koskiusko. Little Llangothlin Lagoon is a Nature Reserve managed by the NSW National Parks and Wildlife Service. It is one of a series of wetlands commonly known as the "Llangothlin wetlands". The other major wetland in the group is Llangothlin Lagoon which is managed as a Game Reserve. Many UNE students, past and present, are familiar with this site as it is a favorite for field trips for units in Botany, Ecosystem Management and GeoPlan.

The University of New England has a long history of research on these wetlands. From the early 1970s research on theinvertebrates and water bird communities was conducted by students and staff from the Department of Ecosystem Management led by Professor Peter Jarman and A/Prof John Weir. From the mid 1980s the Llangothlin lagoons have been major research sites for researchers from the Botany Department. Dr Margaret Brock and Dr Michelle Casanova have studied aspects of the plant ecology over the past decade. Studies of the ecology of both algae (charophytes) and the larger plants have made major contributions to our understanding of the role of plants in wetland ecology. The wetland sites have provided rich sites for postgraduate studies. Most recently these have included the work of Dr Bob Haworth from GeoPlan who has studied the lagoon history from sediment cores and Dorothy Bell from the Botany Department who is studying the ecology of spikerushes.

The listing of this wetland as a site of international significance recognises its value as a representative of a unique and dwindling type of wetland. Many (possibly over 80%) of the wetlands on the New England Tablelands have been drained or dammed or had major water regime alterations. Little Langothlin Lagoon has also been subject to changes some of which have been reversed- the most recent changes have been the removal of grazing and the restoring of the water level to its original height in 1989.

The wetland site will continue to be managed by the NSW National Parks and Wildlife Service and UNE researchers will continue their research on wetland ecology in this and other New England wetlands.

Margaret Brock
mbrock@metz.une.edu.au

BERRI 1996

35TH CONGRESS 1996
&
BIOMANIPULATION WORKSHOP

Berri,
South Australian Riverland

will be held from

September 29 - October 3

See flyer for details or contact Fran Sheldon on
(08) 303 5565
email: asl96@botany.adelaide.edu.au

The 1996 ASL Congress will be held at the Berri Hotel in Berri, heart of the South Australian Riverland, 238 km north-east of Adelaide. Details of travel, accomodation, registration, papers & posters and conference tours are given in the registration papers in the centre of this newsletter.

For convenience, here are the rules for the Student Travel Award and the Student Prize.

STUDENT TRAVEL AWARDS

Applications are invited from research students for travel assistance to attend and present a paper at the Annual Conference of the Australian Society for Limnology. The purpose of this assistance is to encourage students to present the results of their work in public. Students who are carrying out research in any branch of limnology for a higher degree are encouraged to apply. The following rules apply for assistance:

1. Applicants must be full-time postgraduate students at any Australian University, College of Advanced Education or Institute of Technology. There is no age limitation. Applicants must have current financial membership of the ASL for at least 6 months.
2. Assistance will be granted on the recommendation of a panel of three appointed by the Society.
3. Applications must include a written statement of no more than 2000 words describing the research, its significance and the stage that has been reached. This statement must be endorsed by the student's supervisor. An abstract of the paper that the applicant proposes to present must also be included.
4. Award of assistance will be judged on: (i) significance of the work; (ii) originality and soundness of the research; (iii) the progress made and whether the stage has been reached where something useful can be presented; (iv) ability to present a clear and concise statement of the study.
5. Applications must be lodged with Dr Richard Marchant, Museum of Victoria, 71 Victoria Crescent, Abbottsford, VIC 3067 by **30th June**.

STUDENT PRIZES

At the Annual Conference, there will be three student prizes of books (chosen by the recipient) to the value of $100. The prizes are:

1. Prize for the best oral presentation by a Ph.D. or Masters student.
2. Prize for the best poster presentation by a student.
3. Prize for the best oral presentation by an Honours student.

Posters will be assessed during the dedicated poster session and must be attended by the author, who will explain the presentation and field questions. There will be no oral sessions concurrent with the poster session.

The Honours prize was felt desirable because for a number of years members have felt that recent Honours graduates are less experienced at oral presentations and are therefore disadvantaged compared with other graduate students who have nearly completed their research. We hope this prize will encourage recent Honours graduates to attend Congresses and share their results with other members of ASL.

To be eligible for a student prize, students should be current, financial mambers of ASL, and must give their presentation within 18 months of recieving their degree. This "18 month rule" may be varied if successive Congresses are more than one year apart (as the 1994 and 1995 Conferences are being held more than 18 months apart students must give their presentation within 2 years of recieving their degree). The student prizes will be judged by a committee or committees convened by the ASL Executive at the Congress. Wherever possible, such committees will not contain supervisors or co-authors of candidates for the prizes.

CALL FOR JOLLY AWARD NOMINATIONS

The Jolly Award commemorates Hiliary Jolly, a founding member of the Australian Society for Limnology, and is presented to a person who in the opinion of the Society, has made an outstanding contribution to Australian Limnology. The Jolly Award has become the Society's most prestigious prize, considered by members to indicate overall scientific excellence and outstanding achievement.

Any person may be nominated for the Award, but nominations may only be made by financial members of the Society. The nomination must be in writing and must be seconded by a financial member of the Society. Nominations must include a brief supporting statement and a current copy of the nominee's CV. Nominations remain valid for 3 years. An award is not necessarily made each year.

The full regulations governing the award are outlined below.

Nominations are now called for 1996.
Three copies of each nomination should be forwarded, **by 31st August 1996,** to Dr David Mitchell, *The Johnstone Centre, Charles Sturt University, PO Box 789, Albury, NSW 2640.*

JOLLY AWARD REGULATIONS

The following guidelines have been developed with a view to maintaining the stature of the Jolly Award.

Regulations concerning the structure and functioning of the Jolly Award Committee.

Membership and meeting of the Jolly Award Committee

1. The committee shall consist of the three most recent recipients of the Jolly Award. If this is not possible then past recipients, chosen in chronological order, will be added to the committee until it comprises three members.
2. The constituted committee should discuss the award, preferably together at a meeting or by telephone. If this is not possible, for example if a member of the committee is absent from the country for an extended period, then that member should be replaced as described in Point 1. The committee may seek the opinion of the absent member by post or fax.
3. The committee's chairman will be the most recent recipient of the award and he/she will be responsible for organising the call for nominations, circulating nominations and arranging suitable meetings for the selection process. The secretary of the Australian Society for Limnology will maintain records and assist the chairman as required, but will not have voting rights.

4. The decision to make the award must be unanimous, except if a nominee has been promoted to go forward by two members of the committee, during two consecutive annual rounds of selections. In this case the President and Vice-president of the Society will be asked to join the committee and an award can be made on a majority decision. If an award is not made then the situation will revert to normal for the following year.
5. A committee member may not vote on a nominee who works in the same department or shares research projects. If it becomes apparent that such a conflict of interests may occur, then the committee member should be replaced as described in Point 1.

Nominations

1. Any person may be nominated for the Jolly Award.
2. Only financial members of the ASL may nominate a person for the award. The nomination must be in writing and must be seconded by a financial member of the Society. Nominations must include a brief supporting statement and a current copy of the nominee's CV.
3. Nominations will remain valid for three years, after which a person can be renominated as in Point 2.
4. A Society member may be the primary nominee for only one candidate.

Selection Criteria

1. The Jolly Award is not an annual award, but is made on the basis of an outstanding contribution to Australian limnology. The selection committee should ensure that the stature of a successful candidate is commensurate with that of previous recipients.
2. A primary consideration is excellence in the field of limnological research, as demonstrated by key research papers and scientific publications.
3. Consideration should also be given to candidates who have played a major role in the advancement and dissemination of limnological knowledge, particularly where this enhances the information available on Australian aquatic systems.
4. The Award is not intended for administrative excellence or for service to ASL. These are more appropriately recognised by other awards, such as life membership of the Society.

Citation

The announcement of an award will be made at the annual conference and will appear in the Society's Newsletter accompanied by a citation describing the reasons for the award.

Award Value

The nature and value of the award will be determined by the Executive Committee of the Society.

Dr Rod Oliver
(ASL President 1989/90).

ANNOUNCEMENTS

ACF MURRAY-DARLING BASIN SURVEY

Although only 34 out of 564 ASL members (6%) responded to the ACF Murray-Darling Basin survey published in the last Newsletter - the results have shown some interesting trends.

The ACF will be undertaking a national release of the results of the Survey in the next few weeks - Stay Tuned -

REQUEST FOR MATERIAL: GASTROPODS

Winston Ponder has an ABRS grant to work on the sytematics and distribution of Australian Viviparíidae, Bithyniidae and Glacidorbidae. He would greatly appreciate specimens of these groups - fixed (formalin, ethanol, Bouins etc) or empty shells with locality information and collection date.

Please send to:

Dr Winston Ponder
Australian Museum,
6 College Street,
Sydney, NSW 2000.
Phone (02) 320 6120
Fax (02) 320 6050
email winstonp@amsg.austmus.oz.au

REQUEST FOR SPECIMENS: TRICHOPTERA

Jean Jackson Ph/Fax (002) 237 133

I'm working on a Monitoring River Health Initiative-funded taxonomy project on the trichopteran families Conoesucidae, Calocidae and Helicophidae. The aim of the work is to develop nationally standard keys for identification of larvae (to family, genus, species) using a common coding/naming system for taxa. Similar work is also being done for other groups (by John Dean, Ros St Clair, David Cartwright, Phil Suter).

I'm interested in examining larvae from these families from around Australia (so far they're known only from eastern Aust). If anyone has late instar (largish) specimens that they can spare, I'd love to have them. I'd prefer to have specimens that I can keep although they can be returned if necessary. Identifications (where possible) can be provided. Full collection details must be included with specimens.

The study is concentrating on MRHI and museum collections initially; I plan to examine major voucher collections once the framework is established. Extra specimens will help make the work as comprehensible as possible.

Specimens should be sent to me at:

Zoology Department
University of Tasmania
GPO Box 252C
Hobart, Tas 7001

or ring me on the above number with any queries.

WORKSHOP ON THE COOPER: THE IMPLICATIONS OF IRRIGATED COTTON DEVELOPMENT

Local pastoralists and townspeople are inviting expressions of interest from river ecologists in a workshop dealing with the implications of irrigated cotton farming on the Cooper. The workshop would be held in the first week of September this year near the site of a proposed irrigated cotton development on the Cooper at Windorah, western Queensland. The community is willing to provide a field trip into the Channel Country, and may be able to provide some air transport between regional centres and Windorah.

Assessment of the cotton proposal by Queensland DPI includes hydrological but not ecological studies of the Cooper system. Further, the hydrological study will consider only four flood events, and will not extend west of the Queensland border. It is not clear whether the South Australian Government will conduct any studies at all. This is a manifestly inadequate assessment process. It is most important that river ecologists meet to supplement the assessment with an authoritative ecological perspective on the irrigation proposal.

Please register your interest and request for more detailed information by copying this page and returning the flyer.

Jim Puckridge
Zoology, Adelaide

WINDORAH WORKSHOP ON THE COOPER: Expression of Interest.

To: Dr. Bob Morrish
PO Box 7
Windorah, Qld 4481
Ph. 076 564 759 Fax 076 563 168

From

Name:.....

Postal Address:.....

.....

.....

Fax:..... Phone:.....

Area of Interest/Expertise.....

.....

Please provide details of the proposed Windorah workshop.

NEWS FROM FASTS

FASTS MARCH CIRCULAR

From: Joe Baker (President)

I have had valuable meetings with some Members Societies, such as the Australian Geoscience Council and the Australian Society for Plant Physiologists. My job requires a lot of travel around Australia; and if you would like to discuss matters of concern to your Society with me, please arrange this through the FASTS' office.

Executive Director Toss Gascoigne will be in Townsville for Media and Presentation Skills courses from April 22 - 26. Townsville-based groups wishing to meet him should ring the office on (06) 282 2026, or email fasts@anu.edu.au

1. The election and its aftermath.
   Three days after the election, FASTS organised a phone hook-up with the Presidents of the Academy of Science and the Academy of Technological Science and Engineering. The purpose was to discuss post-election strategy, and we very quickly found a common position on PMSEC (Prime Minister's Science and Engineering Council), ASTEC (the Australian Science, Engineering and Technology Council), the ARC (Australian Research Council) and the position of Chief Scientist.

   This was conveyed to the new Minister for Science and Technology (the Honourable Peter McGauran) as soon as the Ministry was announced. At a subsequent meeting, he said that he appreciated the prompt collective advice of the Three Presidents. It certainly underlines the need for collective action by groups involved in science policy in Australia.

2. Meeting with the Minister, the Honourable Peter McGauran
   I raised a number of issues with the Minister. FASTS wanted to clarify who was responsible for what, and how science and technology is to be divided between Mr McGauran and the Honourable John Moore, Minister for Industry Science and Tourism. Also on FASTS agenda were changes to PMSEC, ASTEC, the position of the Chief Scientist and the ARC; and how the Government intended to develop their promised "clear, long-term strategic approach to maximise the contribution of science, engineering and technology to the economic prosperity of the nation".

   FASTS also wanted a Ministerial response to two other proposals. The first was FASTS' offer to organise a comprehensive calendar of scientific events, and the second a suggestion that scientists and technologists should be involved in the 42 Regional Development Organisations established by the previous Government.

   Minister McGauran said he would be responsible for ANSTO, CSIRO, the CRC program, PMSEC and ASTEC, the Chief Scientist and science policy generally. Mr Moore would be responsible for the Syndicate Research and R&D tax schemes as

part of his Industry portfolio. These arrangements are to be formally announced in a paper soon.

He welcomed a FASTS' proposal to begin the process of investigating steps towards a national science and technology strategy by making it a major theme at ANZAAS in Canberra this October. ANZAAS has agreed to this idea, and it was endorsed by the Presidents of the two Academies.

Minister McGauran was less enthusiastic about the idea of a comprehensive science calendar, but said he was willing to be convinced. The calendar proposes a web address which would set out all planned events for the next decade, with the contact details of organisers, an outline of the scope of the event, and information on registration. The executive Director of FASTS is working on the detail.

In general it was a lively and positive 90 minute meeting, and clearly FASTS will continue to bring issues to the Minister at the highest policy making levels.

3. Other Ministers too
FASTS has a broad range of interests which spread across a number of portfolios, and so we have also contacted the Hon. John Moore as Minister for Industry Science and Tourism as cabinet spokesperson for science; and are seeking meetings with Senator Amanda Vanstone (Minister for Employment Education Training and Youth Affairs), Senator Robert Hill (Environment) and John Sharp (Regional Development).

4. FASTS - the second decade
The FASTS Board will consider a 19 point plan at its April meeting. The plan addresses the twin problems of communication and finance, familiar issues to many in science and technology! The plan recommends a revamping of the structure established ten years ago and procedures to provide better service to Member Societies. Ultimately a finished plan will be submitted to FASTS Council meeting on November 21. Minister McGauran has accepted our invitation to speak at Council.

5. The Policy Document
The FASTS Policy Document helped shape science policy debate when it was launched at Parliament House in June last year. It was in such demand it had to go to a second printing, and now is being revised. Look for the launch of the new Policy before mid-year, with revisions shaped by the deliberations of the FASTS' Council last November.

6. Meeting with Member Societies
Last week I met with representatives of the Australian Society of Plant Physiologists. They had voted to disaffiliate at their last AGM, and I wanted to bring them up to date with FASTS activities and to hear of matters of concern to their Society. The ASPP raised infrastructure and career paths for post-docs as key issues, and we also discussed membership of ARC panels, FASTS' meeting with the Minister, and possible nominations for the proposed Council for Vegetation Management.

Like the meetings with the Australian Geosciences Council and Derek Robinson of the Australian Mathematical Society, it proved a useful exchange of ideas and information, and I would invite other Members to contact the FASTS' office to organise similar discussions.

7. New Board Member

Professor David Curtis has resigned from the Board of FASTS because of pressure of work. In his letter of resignation he said: "I do so with great regret as I have been very impressed with the recent activities of FASTS and have great hopes for its future." I would like to thank David for his contributions, and also to welcome Dr David Tracey of the School of Anatomy at UNSW as the new representative of the Medical Sciences group.

8. Media coverage

FASTS has gained increased coverage by the media in recent months, reflecting the energy it has put into raising awareness of science in political circles. Print articles include Campus Review, the Canberra Times, the Sydney Morning Herald, SciTech, Lab News and Search; and Ockham's Razor on radio.

9. Shorts

a. ARC is working on funding strategies for basic research, and details of progress are contained in ARC News Special Edition Feb 1996. Contact foliver@nbeet.deet.gov.au or by fax on (06) 240 9869 with a copy or with comments.

b. WISENET is considering forming a women scientists' umbrella group. Contact Diana Temple on ph. (02) 817 4941 or email dianat@pharmacol.su.oz.au

c. ASTEC study on Young Australians' Views of the Future is available from Eric James on (06) 271 5080 and John Vines (03) 695 8800.

d. FASTS will be putting a submission in to EPAC (Economic Planning Advisory Commission) on science and technology in the budget. Member Societies may like to do the same, or feed ideas through to FASTS office.

hmmmmm

.....hasn't anybody out there among the vast membership attended any conferences.....?????

CONFERENCE CAPERS

AUSTRALIA 1996

- **Australian Society for Limnology**, 29 September to 2 October 1996, Berri, South Australia. Further information available in the March 1996 issue of this Newsletter.

- **Sixth International Behavioural Ecology Congress**, Canberra. 29 September to 4 October 1996. Information: isbe6@anu.edu.au, or to ISBE6, Attention Andrew Cockburn, Division of Botany and Zoology, Australian National University, Canberrra ACT 0200 Australia.

- **The Scientific Savant in Nineteenth Century Australia: a Celebration of the Life, Times and Legacy of Ferdinand von Mueller**, 30 September - 1 October 1996. Part of the Commemorative Conference Royal Botanic Gardens, Melbourne. This conference will include sessions on Australia/overseas scientific links; Intercolonial relations in science; The scientific botanic garden; Scientific explorations in Australia; Darwinism in Australia; Philosophies in Australia; Amateurs and professionals in Australian Science and Government Science; Scientific education. For more information contact Dr Tim Entwisle Phone 03-655 2300, Fax 03-655 2350, Email entwisle@botany.unimelb.edu.au.

- **Beyond the Floras**, 3-5 October 1996. Part of the Commemorative Conference Royal Botanic Gardens, Melbourne. This conference will include sessions on The future of taxonomy; Techniques and developments of importance to systematic botany; Applications of taxonomic information. For more information contact Dr Tim Entwisle Phone 03-655 2300, Fax 03-655 2350, Email entwisle@botany.unimelb.edu.au.

- **Ecological Society of Australia** 9-12 July, 1996, James Cook University, Townsville, Queensland. Symposium sessions include: Frugivory and sees dispersal (Dr R.J. Green); Metapopulations (Dr Hugh Possingham); Ecology for everyone - communicating ecology to scientists, the public and politicians (Dr R.T.Wills); Ecological and evolutionary processes at species borders (Dr M. Blows); Replenishment of populations (Dr T. Hughs and Dr M. Keough); Bat Ecology (Dr G. Richards). Abstracts for Symposium Sessions are due by 12.4.96 and for Open Forum sessions by 26.4.96. Information from Mrs Barbara Kayrooz, Dept. of Zoology, James Cook University, Townsville, Qld 4811. Phone: 077-814858 Fax: 077-25 1570 Email: esq96@jcu.edu.au.

- **Second World Fisheries Congress**, 28 July to 2 August, Brisbane, Queensland. Information from Congress Secretariat, PO Box 1280, Milton Qld 4046. Fax: 07-3691512.

- **INTECOL V International Wetlands Conference**, 22-28 September 1996, Perth, Western Australia. Information from Dr Jenny Davis, Fax: 09-3104997 Email: davis@essun1.murdoch.edu.au.

- **International Symposium on Environmental Chemistry and Toxicology**, 14-18 July 1996, Sydney. The meeting incorporates the First Conference for SETAC-Pacific, the Fifth Conference of the RACI Environment Dividion and the Third Conference of the Australasian Society for Ecotoxicology. Contributions on all aspects of environmental chemistry and toxicology will be considered. There will be sessions for formal papers and posters, as well as workshops on specific issues. For registration details, including the call for papers contact Ngarita Bishop, InterSECT 96, PO Box 787. Potts Point NSW 2011, Australia. Ph: +61 (0)2 357 2600, Fax: +61 (0)2 357 2950. Email: intersect96@syd.dcet.csiro.au

- **Complex Systems: From Local Interaction to Global Phenomena**, 14 - 18 July 1996, Charles Sturt University, Albury, New South Wales. Principal Speaker will be Chris Langton, Santa Fe Institute. Anyone interested should complete an Expression of Interest form available on-line at http://life.csu.edu.au/complex/interest.html. Deadline of final submission of Abstracts of 12 April 1996. Further information from Prof. David Green, email: dgreen@csu.edu.au.

- **WaterTECH 1996**, Australian Water and Wastewater Association, Darling Harbour, Sydney, 27 and 28 May 1996. Sessions will include "Biosolids", "Stormwater and Sewer Overflows", "Water Reclamation and Reuse" and "Drinking Water Supply". Details from Conference Secretariat, PO Box 388, Artarmon NSW 2064. Ph: 02 413 1288 Fax: (02) 413 1047.

OVERSEAS 1996

- **Victoria Falls Conference on Aquatic Systems**, 15-19 July 1996, Elephant Hills Hotel, Victoria Falls, Zimbabwe. The conference is jointly organised by the Southern African Society of Aquatic Scientists, the River Basin Management Technical Division of the Water Institute of Southern Africa and the Water Engineering Division of the South African Institution for Civil Engineers. The conference will focus attention on the monitoring and management of our water resources, aiming to provide a multidisciplinary overview of aquatic ecosystems and resource management. Abstracts should be submitted by 30 June 1995. Enquiries and registration forms from Ms Lesley Stephenson, Conference Secretary, Ph: +27-011-716-5091, Fax: +27-011-339-7835, Email: stephenson@egoli.min.wits.ac.za.

- **WISA 96** (Water Institute of South Africa), 13 to 20 May 1996, Feather Market Centre, Port Elizabeth, South Africa. Information from: Conference Planners, PO Box 82, Irene, 1975 South Africa. Phone: Pretoria (012) 63-1681 or Fax (012) 63-1680.

- **Ecological Summer Summit '96**, 19 to 23 August 1996, Copenhagen, Denmark. The Summit incorporates the 10th International Conference on Ecological Modelling, the Intternational Conference on Ecological Engineering, the 2nd International Symposium on Ecosystem Healtth and the European Meeting on Ecological Economics. Further information from: Gill Spear, ECO-Summit '96 Secretariat, Elsevier Science Ltd., Conference Department, The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, UK. Phone: +44 1865 843643. Fax: +44 1865 843958. Email: g.spear@elsevier.co.uk. Web-server INFO accessible at: htttp://info.dfh.dk/ECOSUM96

- **North American Benthological Society**, 3-7 June 1996, Kalispell, Montana, USA.

- **Workshop on Aquatic Systems Studies**, June 1996, Kananaskis Field Station, Alberta USA.. A three day workshop to follow the NABS meeting. Further information from: Roger Green (rgreen@julian.uwo.ca) or Jan Ciborowski (cibor@server.uwindsor.ca)

- **River Restoration '96** - International Conference on Restoration and Management of Lowland River Systems, 8-12 September 1996, Silkeborg, Denmark. The four-day scientific programme will cover all aspects of restoration and management of lowland river and watershed ecosystems. Further information from: Hans Ole Hansen and Brian Kronvang, European Centre for River Restoration, Department of Freshwater Ecology, National Environmental Research Institute, Ministry of Environment and Energy, PO Box 314 Velsøvej 25, DK-8600 Silkeborg, Denmark. Ph: +45 89 201 400, Fax: +45 89 201 414, email: fvhoh@dmu.dk or fvbk@dmu.dk

OVERSEAS 1997

- **Multivariate Statistics - Complex Answers to Simple Questions?** Two day meeting December/ January 1997 under the banner of SETAC (Society of Environmental Toxicologists and Chemists) for those interested in ecotoxicology. There will be presentations of multivariate analysis of surveys, experiments and monitoring studies including a review and demonstration of current software. Contact: Dr Tim Kedwards, ZENECA Agrochemicals, Ecology and Soil Science, Jealott's Hill Research Station, Bracknell, UK RG42 6ET. Ph: 44 (0) 1344 414107, Fax: 44 (0) 1344 414124 Email: tim.kedwards@gbjha.ZENCA.com

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The following people have volunteered to speak as experts on behalf of the ASL. If you wish to be included on the list contact:

Dr Richard Marchant (ASL Secretary)
Email: rmarch@pioneer.mov.vic.gov.au

The following members are prepared to speak on behalf of the ASL on their area of expertise.

Name	Area of Expertise	Contact Details
Prof A. Arthington	in stream flows, ecology of exotic fishes, conservation of rare fishes.	Centre for Catchment & Instream Res, Griffith University, Natham Qld. 4111. Phone (07)275 7403 , Fax: (07)277 3759
Dr P. Boon	bacteriological issues, wetlands.	Environmental Management, Victoria University of Tech., PO Box 14428 MMC, Vic. 3000. Phone (03)9365 2214, Fax (03) 9365 2465. email:boopa@stamail1.vut.edu.au
Dr A. Boulton	intermittent streams, hyporheic zones, Flinders Ranges	Ecosystem Management, University of New England, Armidale, NSW 2351. Phone (067)733760, Fax (067)732 769 email: aboulton@metz.une.edu.au
Dr M. Brock	temporary wetlands, aquatic plants	Botany Department, University of New England, Armidale NSW 2351. Phone (067)732 578, Fax (067)733 283 email: mbrock@metz.une.edu.au
Dr S. Bunn	stream ecology, ecology of riparian zones, biomonitoring	Faculty of Environmental Sciences, Griffith University, Nathan, Qld 4111. Phone (07)8757 407, Fax (07)875 7459, email: s.bunn@ens.gu.edu.au
Dr G. Closs	ecology and conservation of freshwater fish, upper Murray River	Environmental Management & Ecology, LaTrobe University, PO Box 963, Wodonga, Vic. 3689 Phone (060)583873 ,Fax:(060)583888 email:gcloss@awc-net.latrobe.edu.au
Dr T. Entwisle	taxonomy and ecology of freshwater macroalgae	National Herbarium of Victoria, Birdwood Ave, South Yarra, Vic. 3141. Phone (03)96552313, Fax (03)9655 2350 email: Entwisle@botany.unimelb.edu.au
Dr M. Finlayson	wetlands, Ramsar convention	Alligator Rivers Region, Office of Supervising Sci, Post Office, Jabiru, NT 0886 Phone (089)799 756, Fax(089)792 499 email:masf@eriss.erin.gov.au
Dr T. Grant	platypus biology	Biological Science, University of NSW, PO Box 502, Cronulla, NSW 2230
K. Hortle	impact of mining, impact of development in Se Asia and PNG on rivers	Environmental Management, 18 Sharrow Road, Mitcham, Vic. 3132 Phone and Fax: (03) 9872 4101

Dr P. Horwitz	conservation of freshwater invertebrates	Dept of Science, Edith Cowan University, Joondalup Drive, Joondalup, WA 6027. Phone (09)4055717, Fax: (09)300 1257 email: phorwitz@cowan.edu.au
Dr P. Humphries	fish ecology, in-stream flows	CRC Freshwater Ecology, MDFRC, PO Box 921, NSW 2640. Phone (060)43 1002, Fax:(060)43 1626 email: hump@watson.canberra.edu.au
Dr G. Jones	cyanobacterial blooms	CSIRO, PMB 3, Griffith NSW 2680. Phone (069)601563, Fax: (069)601600 email:gary@griffith.dwr.csiro.au
Dr P.S. Lake	stream ecology, conservation freshwater biota	Ecology & Evolutionary Biology, Monash University, Wellington Road, Clayton, Vic. 3168. Phone (03)9055 653, Fax:(03)9055613 email: p.s.lake@sci.monash.edu.au
Prof J. Layboum-Parry	plankton microbial ecology, carbon cycling in lakes, Antarctic freshwater systems	Zoology Dept, LaTrobe University, Bundoora, Vic. 3083. Phone (03) 479 2278
Dr V. Matveev	plankton food webs, biomanipulation	MDFRC, PO Box 521, Albury, NSW 2640. Phone: (060) 431002, Fax: (060) 431626.
Dr R. Pearson	tropical freshwater ecology	Zoology Dept. ACTFR, James Cook, University, Townsville, Qld. 4811. Phone:(077)814 262, Fax: (077)79 6371
J. Puckridge	ecology of arid zone rivers, ecology of freshwater fish	Zoology Department, University of Adelaide, Adelaide, SA 5005. Phone (08) 3034455. Fax: (08) 303 4364
Dr N. Rea	wetland plant ecology, water regime, weeds and conservation	CSIRO Entomology, TERC, PMB44, Winellie, Darwin NT 0821 Phone (089) 221717, Fax: (089)221714, email: naomi@terc.csiro.au
Dr R. Shiel	planktonic & littoral microfauna, billabong ecology.	MDFRC, PO Box 921, NSW, 2640. Phone (060) 431002, Fax: (060) 431626
Dr L. Townley	: groundwater-surface water interaction.	CSIRO Division of Water Resources, Private Bag, Wembley, WA 6014 Phone (09)387 0329, Fax: (09)3878211
A/Prof K.F. Walker	Murray - Darling basin rivers	Zoology Dept, University of Adelaide, Adelaide, SA 5005. Phone (08)303 5595, Fax: (08) 3034364
Prof. W.D. Williams	Salt lakes	Zoology Dept, University Adelaide, Adelaide SA 5005. Phone (08)303 4455, Fax: (08) 3034364

BIBLIOGRAPHY

Please send details (or copies) of books, chapters, articles, periodicals, monographs, reports, newsletters, videos and CDÆs to Russ Shiel, MDFRC, PO Box 921, Albury, NSW 2640. Go on, do it...see your name in print..

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